REMARKS

Claims 1-7 are pending. By this response, claims 1 and 4 are amended. Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

Claims 1-6 stand rejected under 35 U.S.C. §103(a) in view of Maenaka et al. (US 7,039,254) and Jiang (US 7,242,819) and claim 7 stands rejected under 35 U.S.C. §103(a) in view of Maenaka, Jiang and Utagawa (US 6,563,538). These rejections are respectfully traversed.

Claims 1 and 4 as amended recite, *inter alia*, a plurality of interpolation circuits, each interpolation circuit independently calculating interpolation candidate data of the same unknown interpolation pixel for each unknown interpolation pixel based on calculations performed on test interpolation data of a plurality of normal pixels neighboring the interpolation pixel, where each interpolation circuit uses a different interpolation method, wherein said test interpolation data is calculated for each of said normal pixels on the assumption that said normal pixels are lost using said different interpolation method and sending each interpolation candidate data from each interpolation circuit for each unknown interpolation data to an output circuit; a determining circuit for selecting one of the interpolation circuits based on a difference between the test interpolation data and actual pixel data of said plurality of normal pixels and providing a selection signal to said output circuit; and said output circuit for outputting the interpolation candidate data calculated by the selected interpolation circuit as the interpolation pixel data according to the selection signal.

Applicants claims refer to performing interpolation on each lost pixel. Interpolation is performed for each interpolation circuit on the same lost pixel in order to obtain candidate data associated with each of the interpolation circuits. Each of the candidate data obtained from each of the interpolation circuits is provided to the output circuit.

Test interpolation data is also obtained from a plurality of normal pixels adjacent to the lost pixel being interpolated. These tests are done on normal pixels as if they were lost pixels and the values obtained, test interpolation data, is compared to

the actual values of these pixels in the determination circuit. Thus, on a pixel level the difference between the test interpolation data and the actual pixel data is obtained in the determining circuit for each of the interpolations circuits. This data is then used to determine which interpolation circuit is best for the lost pixel and a selection signal is then sent to the output circuit which selects the appropriate candidate data from amongst each of the candidate data for each of the interpolation circuits which has already been calculated. This candidate data then replaces the lost pixel. This process is done for each of the lost pixels.

In the Advisory Action dated April 12, 2010, the Examiner states

"Ashibe made the assumption that pixels are going to be lost or thinned during the compression / thinning process and reconstruction by interpolation is necessary. Further, Ashibe specifically mentioned 'then, the sum in the block of the absolute value of the difference between an interpolation signal and an original signal... is calculates'. Thus, the sum is generated by adding up the absolute value difference between each of the interpolated pixel, which was lost during the compression / thinning process within each block, and actual / original pixel data."

Applicants respectfully submit that Ashibe's teachings are directed to block based processing and thus performs a thinning operation determined on a block of pixels and not specific to each "lost" pixel. Ashibe's teachings evaluate the best thinning ratio for each block of pixels and determines which thinning ratio provides the least amount of lost data for that specific block of pixels. Applicants respectfully submit that while reconstruction is performed on the block, an evaluation of each "lost" pixel using each of a plurality of different thinning operations to obtain a different "candidate data" for each of the individual lost pixels based on each of those operations is not taught by Ashibe. Ashibe teaches determining the best thinning ratio for the individual block data and then reconstructing that block using a predetermined reconstruction process. An evaluation of each "lost" pixel obtained from the thinning process is not taught, let alone to determine for each of the individual "lost" pixels the best reconstruction circuit from amongst a plurality of reconstruction circuit. The determination in Ashibe's teachings is made for the initial thinning operation on a block of pixels and not for the reconstruction operation after thinning has occurred and also not for individual "lost" pixels.

Thus, Ashibe fails to teach each and every feature of the independent claims 1 and 4 for which Ashibe is allegedly provided to teach.

Further, Jiang teaches determining a pixel based on the direction of a detected edge by using the surrounding pixel values. This determination is fixed based on the direction of the edge. Thus, Jiang teaches at best that a different value can be determined for a pixel based on a different initial criteria, e.g., a detected edge direction. Jiang does not calculate "candidate data." Jiang makes one calculation of the replacement pixel data once the edge direction has been determined.

Furthermore, Maenaka teaches various interpolation methods using different embodiments. These different methods are not integrated as part of a determination of the best method to use for interpolation on each individual lost pixel. Further, there is no teaching in Maenaka of using normal pixels in the process of determining the best interpolated pixels from amongst a plurality of interpolation circuits to use for the lost pixel.

Therefore, in view of the above, it is respectfully submitted that claims 1 and 4 are distinguished from the cited art. Further, claims 2-3 and 5-7 are likewise distinguished from the cited art for the reasons above as well as for the additional features they recited. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Conclusion

For at least the above reasons Applicants respectfully submit claims 1-7 are distinguishable over the cited art. Favorable consideration and prompt allowance are earnestly solicited.

Should there by an outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad J. Billings, Registration No. 48,917 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

BIRCH, STEWART, KOLASCH & BIRCH, LLP

CJB/lps

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: April 29, 2010

Respectfully submitted,

By _____
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Attachments